Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	06 October 2022
Team ID	PNT2022TMID08252
Project Name	EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRE
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table2

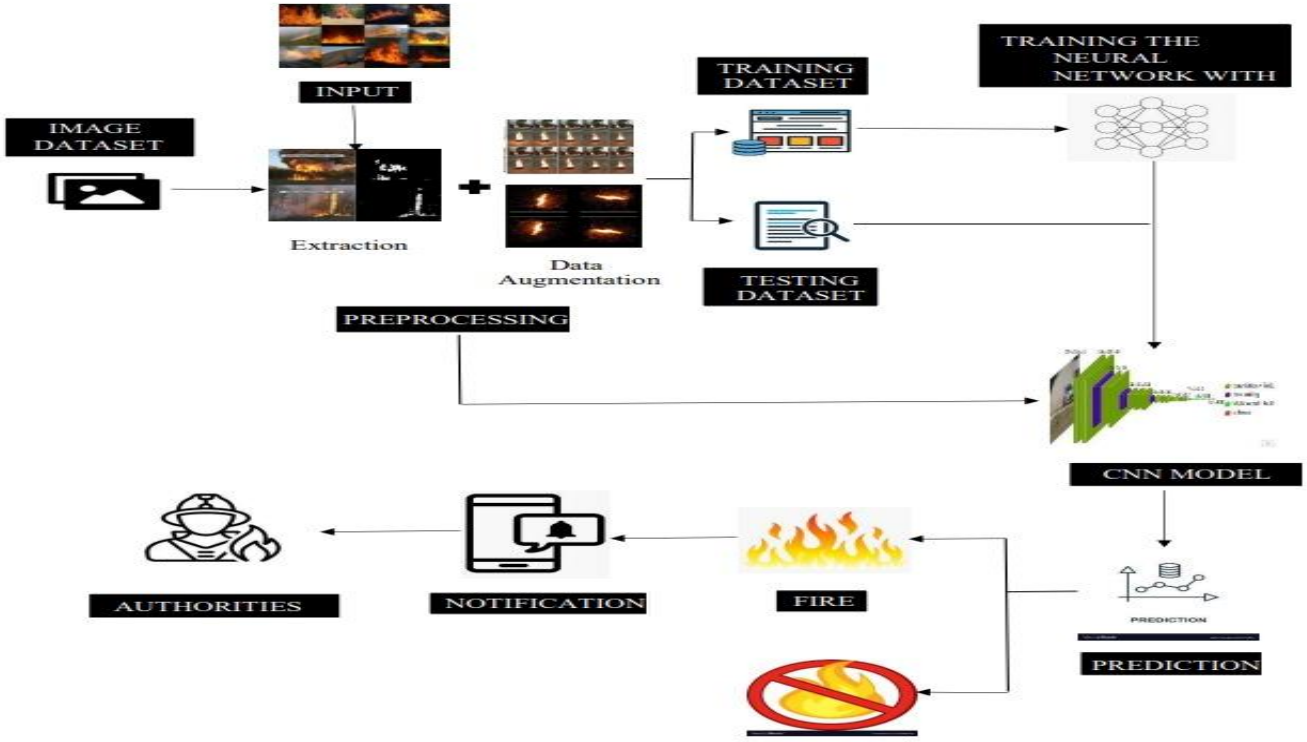

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Authorities work for the wildlife .	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Logic-1	Web camera detects fire.	Python
3.	Logic-2	The CNN Model confirms the detection of fire	CNN
4.	Logic-3	An alert is sent to the authorities.	IBM Watson Assistant
5.	Database	Integer datatype	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM cloudant etc.
7.	File Storage	Files are stored in the cloud	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the process is to check the weather	IBM weather API, etc
9.	Deep Learning Model	Purpose of Deep Learning Model is to recognise the fire image from the video frames.	Object Recognition Model, etc.
10.	Infrastructure (Server / Cloud)	IBM cloud configuration is a centralized feature management and configuration service on IBM cloud	IBM cloud foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Web camera	YOLO,CNN
2.	Security Implementations	Web camera is used to monitor the initiation of fire.	YOLO, CNN
3.	Scalable Architecture	Authorities receive the alert once the fire is detected.	Alarm system
4.	Availability	24/7 monitoring by web cameras and the authorities are available for help.	YOLO
5.	Performance	The authorities will receive the alert immediately after the fire is detected.	Alarm system